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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Peter Kamvysselis

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EXAMINER

SHINGLES, KRISTIE D

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,903

Applicant(s)

KAMVYSSELIS, PETER

Examiner

Kristie Shingles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-35, 37-39, 55-57, 59-61 and 63-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-35, 37-39, 55-57, 59-61 and 63-91 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Claims 1-32, 36, 40-54, 58 and 62 have been cancelled.

Claims 33-35, 37-39, 55-57, 59-61 and 63-91 are pending.

Response to Arguments

1. Applicant's arguments with respect to claims 33, 55, 63, 72 and 81 filed 2/6/2006 have been fully considered but are not persuasive.

A. Regarding claims 33 and 55, Applicant argues in substance that cited prior art of reference, *Achiwa et al* (US 6,643,750) fail to teach any buffer device interposed between the storage devices as recited in the present claims.

A.1. Examiner respectfully disagrees. In response to Applicant's argument that the reference fails to show certain features of Applicant's invention, it is noted that the feature upon which Applicant relies (i.e., the buffer device is or has to be interposed between the storage devices) is not recited in the rejected claim(s). According to Applicant's claim language, the claimed limitations regarding the buffer device include: *synchronously transferring the data from the first storage device to a first buffer device; asynchronously transferring the data from the first buffer device to a second buffer device; synchronously transferring the data from the second buffer device to the second storage device; and providing data from the first buffer device to the second buffer device using a network.* Applicant's claim language does not state that the buffer device is or has to be interposed between the storage devices, only that there exists a first and second buffer device wherein the first buffer device is in communication with the first

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storage device, the first buffer is in communication with the second buffer and the second buffer is in communication with the second storage device. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

A.2. Furthermore, as noted in the previous Office Action, *Achiwa et al* teaches a first and second buffer in communication with first and second storage devices as recited in the claim language. *Achiwa et al* provision a main storage apparatus and a substorage apparatus, wherein data is transferred from the main storage to the first storage area; then transferred from the first storage area to the second storage area; and sent from the second storage area to the substorage apparatus (col.3 line 43-col.4 line 6). The main storage apparatus and the substorage apparatus suffice as the first and second storage devices, while the first and second storage areas achieve the function of the first and second buffers. Applicant's arguments are therefore non-persuasive and the rejection of the above claims is maintained.

- B. Regarding the cited prior arts of record, *Achiwa et al* (USPN 6,643,750) and *Tan et al* (USPN 6,625,621), Applicant argues that the teachings of these references are arguably opposite.

Examiner respectfully disagrees. *Achiwa et al* is relied upon for its implementation of a storage system with additional storage area for backing-up the data. *Tan et al* is cited in combination with *Achiwa et al* for its implementation of data synchronization wherein a sync server acknowledges successful transmission of queued data changes to the record before all of the data is sent to the network (col.13 lines 14-40). The Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the

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claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the teachings relied upon achieve the scope and functionality of the claim limitations by provisioning a storage back-up system with synchronization means for sending an acknowledgment message before all of the data has been transmitted to the receiving networked storage device; because it provides a quicker response time in anticipation of all the data being transferred to the receiving device—especially for large time-consuming packets. Applicant's arguments are therefore non-persuasive and the rejections under the cited prior art are maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 33, 37, 55, 59, 63, 64, 68, 72, 73, 77, 81, 82, 86, 90 and 91** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Achiwa et al* (USPN 6,643,750) in view of *Williams et al* (USPN 6,721,286) in view of *Tan et al* (USPN 6,625,621).

a. Per claims 33, 55, 63, 72 and 81, *Achiwa et al* teach a method of transferring data from a first storage device to a second storage device, comprising;

- synchronously transferring the data from the first storage device to a first buffer device (col.3 lines 22-32; data is synchronously transferred between the host device and the main storage apparatus);
- asynchronously transferring the data from the first buffer device to a second buffer device (col.3 lines 33-42; asynchronous transferring from the main storage apparatus to the substorage apparatus); and
- synchronously transferring the data from the second buffer device to the second storage device (col.3 lines 43-58; transferring the data from the substorage to the second storage).

Yet *Achiwa et al* fail to explicitly teach providing the data from the first buffer device to the second buffer device using a network, wherein the data is provided from the first storage device in a first format and is provided to the network in a second network that is different from the first format. However *Williams et al* teach the data is provided from the source in a first format and is provided to the network in a second format and is received by the destination in a third format, wherein the second format is different from at least one of: the first format and the second format (col.1 lines 45-55, col.5 lines 26-66 and col.8 lines 12-42).

Yet *Achiwa et al* and *Williams et al* fail to explicitly teach wherein the first buffer device acknowledges successful transfer of the data to the first storage device prior to the first buffer device completing transfer of the data to the second buffer device. However, *Tan et al* disclose a sync server that acknowledges successful transmission of queued data changes to the record before all of the data is sent to the network (col.13 lines 14-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Achiwa et al* and *Williams et al* with *Tan et al* for the purpose of permitting an

acknowledgment message to be sent before all of the data have been transmitted to the network; because it would provide a quicker response time in anticipation of all the data being transferred to the network—especially for large time-consuming packets. Furthermore it is obvious to provide data in various formats, in order to service transferred data in formats consistent with the devices receiving the data.

b. **Per claim 37**, *Achiwa et al* and *Williams et al* with *Tan et al* teach the method of claim 33, *Williams et al* further teach wherein the second storage device receives the data in a first format different from a second format used to transmit the data over the network (col.1 lines 45-55, col.5 lines 26-66 and col.8 lines 12-42).

c. **Claims 59, 64, 68, 73, 77, 82 and 86** are substantially similar to claim 37 and are therefore rejected under the same basis.

d. **Per claim 90**, *Achiwa et al* and *Williams et al* with *Tan et al* teach the method of claim 33, *Tan et al* further teach wherein the first buffer device acknowledges successful transfer of the data to the first storage device prior to all of the data being provided to the network (col.13 lines 14-40).

e. **Claim 91** is substantially similar to claim 90 and is therefore rejected under the same basis.

4. **Claims 34, 35, 38, 39, 56, 57, 60, 61, 65-67, 69-71, 74-76, 78-80, 83-85 and 87-89** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Achiwa et al* (USPN 6,643,750) and *Williams et al* (USPN 6,721,286) in view of *Tan et al* (USPN 6,625,621) and further in view of Applicant's Admitted Prior Art (hereafter referred to as *AAPA*).

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a. **Per claim 34**, *Achiwa et al* and *Williams et al* with *Tan et al* teach the method of claim 33 as applied above, yet fail to distinctly teach the first format being RDF format. However, in *AAPA* discloses use of the RDF format when transmitting data from a storage device to a host (page 2 line 4-page 3 line 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Achiwa et al*, *Williams et al* and *Tan et al* with *AAPA* for the purpose of employing communication with remote data facilities (RDF); because it would permit connecting and communication among storage devices in order to implement a redundant data mirroring system.

b. **Claims 38, 56, 60, 65, 69, 74, 78, 83 and 87** are substantially similar to claim 34 and are therefore rejected under the same basis.

c. **Per claim 35**, *Achiwa et al*, *Williams et al* and *Tan et al* with *AAPA* teach the method of claim 34 as applied above, *Williams et al* further teach the method wherein the second format is one of TCP/IP and UDP (col.11 lines 6-17, col.12 lines 41-55, col.13 line 55-col.14 line 59 and col.16 lines 2-12 and col.18 lines 17-24).

d. **Claims 39, 57, 61, 66, 67, 70, 71, 75, 76, 79, 80, 84, 85, 88 and 89** are substantially similar to claim 35 and are therefore rejected under the same basis.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Ellis* (USPN 6,421,280), *Nakano et al* (US 2005/0120093), *Walker et al* (USPN 6,122,629), *Bennett et al* (USPN 6,775,707), *Odom et al* (USPN 6,957,268).

6. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds


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SUPERVISORY PATENT EXAMINER